

ABSTRACT OF THE DISCLOSURE

A method of making an implantable electrode array, adapted for insertion into a cochlea, includes the steps of: (a) forming electrode contact pieces made from a precious, biocompatible material into a desired shape;

5 (b) attaching the electrode contact pieces to a foil sheet made from a non-toxic but chemically-active metal; (c) connecting a wiring system to the metal contact pieces; (d) molding a flexible polymer carrier around the electrode contact pieces and wiring system while such are held in place by the foil sheet; and (e) etching away the foil sheet, leaving the electrode contact pieces exposed at a surface of

10 the molded polymer carrier. The exposed electrode contacts are made so as to have a shape, geometry, or makeup that aids in controlling the current flow and current density associated with the electrode contact as a function of position on the electrode contact.